Horticulture Hints

Summer 2010

LSU AgCenter Research & Extension

Landscape Gardening and Ornamentals

Sunflowers among easiest flowers to grow

Sunflowers are among the easiest flowers to grow and they thrive in the heat of our summers. This quick, easy growth is why children often are so delighted with sunflowers.

Depending on the cultivar, sunflowers will bloom anytime from about 55 to 75 days after planting the seeds (check the seed package information). Sunflowers can be broadly divided into those that are grown for production of edible seeds and those grown as ornamentals and cut flowers.

You can start sunflower seeds in small containers that have drainage holes and are filled with potting soil. Locate the containers in full sun to produce strong, stocky transplants. Make sure you water regularly, and never allow the soil to become dry. When the seedlings have grown to be 4 to 6 inches high, transplant them to sunny flower beds.

You can also sow the seeds directly into a prepared garden bed in full sun. After sowing the seeds, water the bed well and then water the bed as needed to keep the soil moist (water lightly every day if the weather is dry).

While children often get a big thrill out of growing giant sunflowers, adults may find them a bit overwhelming for their gardens. Thankfully, breeders have developed a wide range of sunflower heights, and you can find cultivars that grow anywhere from about 1 foot to 8 feet tall or more.

In addition to a wide range of heights, sunflowers also come in a wide range of colors. While brilliant yellow will always be popular, you can also choose from creamy white, bronze, mahogany, rusty red, burgundy and orange, with some types producing flowers with more than one color. The center disk of the sunflower also adds to the display and goes through color changes as the flower matures and seeds form. There are even double types that produce flowers full of petals with no central disk at all (such as Teddy Bear).

Sunflowers that are grown for cut flowers generally produce numerous flowers on a more bushy plant than those types grown for seeds which generally produce a single large head. The multiple flowering habit makes these types more colorful and helps them fit into traditional flower beds more appropriately. They come in a wide variety of colors.

If you want to grow sunflowers for the delicious, nutritious seeds, make sure you choose cultivars bred for seed production, such as Mammoth Russian (also known as Mammoth, Russian Giant and Gray Stripe). These tall-growing sunflowers produce a single enormous flower at the top of the plant. To grow a really big seed head, make an application of general-purpose fertilizer when the flower head begins to appear.

The versatility and variety of today's sunflowers offer something for almost every garden and gardener. If you haven't tried this native American plant lately, give it another look.

Bark lice harmless

You may be alarmed to see a thin film of silvery webbing over large areas of the bark of your trees in late summer. The webbing may extend from the ground up the trunk and into the branches.

The good news is the insects that produce the webbing, known as bark lice or psocids, are harmless. They are scavengers and will not hurt the tree. So no control is necessary.

Summer-blooming vines add to landscape

Vines can add much to a landscape, and there are many beautiful blooming vines we can use. Consider these vines for colorful flowers.

Perennial Vines:

- Rose of Montana (*Antigonon leptopus*, also called Rosa de Montana and Coral Vine)
- Coral honeysuckle (*Lonicera sempervirens*)
- Evergreen Wisteria (*Millettia reticulata*)
- Akebia (*Akebia quinata*)
- Mandevilla (*Mandevilla,* Alice DuPont and other varieties – not winter hardy)
- Blue Passion Vine (*Passiflora caerulea*).

Annual Vines:

- Hyacinth Bean (*Dolichos lablab*)
- Cypress Vine (*Ipomoea quamoclit*)
- Cardinal Vine (*Ipomoea multifida*)
- Moon Flower Vine (*Ipomoea alba*)
- Morning Glory (*Ipomoea purpurea*).

Ways to avoid using pesticides

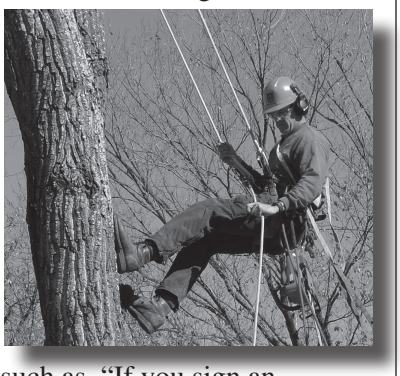
The major pests we deal with are insects, weeds and fungal diseases. A pesticide is a product, whether organic or chemical, used to kill the target pest. Insecticides are used for insect control, herbicides are used in weed control and fungicides control fungal organisms.

It is important to remember the use of pesticides is only one method for controlling pests. There are other techniques gardeners should use to try to prevent the severe infestations that make the use of pesticides necessary. Minimizing the use of pesticides, whether they are chemical or organic, is always a good idea.

1. Make it a point to inspect your landscape frequently for developing problems. Weed control is a prime example where early intervention is far easier and more effective than letting a situation get really bad before taking action.
2. One of the best defenses against pest problems is to keep your plants in tiptop condition through good culture. Good culture includes proper spacing when planting and planting the right plant in the right location where it receives the proper soil, drainage, water, light and nutrients.
3. An excellent way to avoid insect and disease problems is through plant selection. Choose plants that are well adapted to our climate, those which have been bred and selected for insect and disease resistance and those that are simply not prone to major problems. If you have a plant or plants that constantly seem to have something attacking them despite your best efforts, consider removing them and replacing them with plants you have found to require less care.
4. In vegetable gardens and annual flower beds which are replanted from season to season, crop rotation is important. Planting the same type of plants in the same bed year after year can cause a buildup of disease organisms in the soil that use the plants as a host. If possible, plant different things in your garden in different places every year.
5. Proper sanitation is another important factor in controlling insect, weed and disease problems. Always keep your yard, gardens and adjacent areas as weed free as possible. Fruit and fallen leaves infected with disease should be raked up, bagged and thrown away.
6. Some disease organisms live in the soil and are splashed onto plants by rain. The application of mulch to soil under plants can reduce the occurrence of these types of diseases. This is especially helpful when growing fruit and vegetable crops like tomatoes, squash and strawberries.
7. Mulches also are the best way to save work and reduce the use of herbicides to control weeds in beds. Weeds certainly are a leading garden pest. Weed control, by whatever method you use, is always more effective when done regularly and before the weed problems become major issues.

Tips for selecting an arborist

With the start of hurricane season, you should carefully evaluate your shade trees for problems. If works needs to be done, it's best to hire a licensed arborist. Here are some things to consider when hiring an arborist.



- Check in the Yellow Pages under "Trees" for local companies that do tree care. Having an ad in the phone book indicates the company has some degree of permanence. The Louisiana Department of Agriculture and Forestry website lists the licensed arborists in Louisiana by parish.
- Beware of door-knockers. This is especially common after storms when nonprofessionals see a chance to earn some quick money.
- Never let yourself be rushed by bargains such as, "If you sign an agreement today, I can take 10 percent off the price."
- Ask to see their state arborist license. All practicing arborists must be licensed by the Louisiana Department of Agriculture and Forestry.
- Ask to see certificates of insurance, including proof of liability for personal and property damage and workman's compensation. Then phone the insurance company to make certain the policy is current.
- Ask for local references, and look at other jobs the company has done. Check with the Better Business Bureau.
- Have more than one arborist look at the job and give you estimates to ensure you get a fair price. This also allows you to get other opinions on what work needs to be done. But don't expect one arborist to lower his bid to match another arborist's estimate.
- A good arborist will never recommend or agree to "topping a tree" except under rare circumstances (such as to save the tree after severe physical damage to the crown).
- Unless you simply need a tree removed, choose a company that offers a wide range of services (such as pruning, fertilizing, cabling/bracing, pest control, etc.).
- Do not allow an arborist to use climbing spikes to climb a tree unless the tree is being removed.
- To make sure the work is performed to the standards you expect, a written contract is recommended. It should include the dates when the work will start and finish, exactly what work will be done, what cleanup work will be done, when that cleanup will be done and the total dollar amount you will be charged. If a tree is to be removed and the stump ground down, make sure the company agrees to remove all of the wood chips.
- It's recommend that you be present while the work is being done, even if you have to take off from work.

Don't be your trees' or plants' worst enemy

String trimmers that use a monofilament line for cutting down weeds and grass can be very damaging to young trees.

Young trees have relatively thin bark. If the line is allowed to hit the trunk, part of the bark will be removed with each contact of the line. If you are not careful, you might even remove an entire ring of bark all the way around the trunk, thus girdling the tree.

Mowers pushed hard up against or dragged around the base of young trees can be almost as damaging.

The part of a tree's circulatory system that carries food manufactured by the leaves to the roots (which can make no food for themselves) lies just under the bark. The damage that occurs when mowers or string trimmers remove patches of bark interferes with the tree's ability to send food to its roots. As the roots are deprived of food, they become stunted and function poorly, and this leads to a stunted, unhealthy tree. Remove a complete ring of bark, and you may cut off food to the roots altogether. The roots die of starvation, which leads to the death of the tree.

In addition to interfering with food movement, the open wounds created by mowers and trimmers can provide entry points for disease organisms that can cause decay.

Many sickly, stunted trees that have been planted for years but don't grow well have been damaged in this way. Look at the base of their trunks, and you often will see scars and callus growth from repeated injury done to the base of the tree.

To prevent these problems, do not allow grass to grow close to the base of young trees for the first three to five years after planting. Keep an area at least a foot out from the trunk free of grass (2 feet or more is better). A mulch, 2 to 3 inches thick, spread evenly over the area, but pulled back slightly from the trunk, will help a lot. Any stray weeds can be killed with a quick spray of glyphosate, if necessary.

Shrubs generally are planted in beds, so they are less at risk. But this problem occasionally occurs when ground covers, such as Asiatic jasmine, are trimmed away from the base of shrubs with string trimmers.

Whether you maintain your landscape yourself or pay someone to do it for you, don't let this kind of needless damage happen to your trees and shrubs.

Dividing bromeliads great way to develop plant propagation skills

Bromeliads are tropical or semi-tropical plants that are popular container plants.

Once a bromeliad blooms, however, the original plant slowly dies but produces new plants, called pups, at its base before it dies. One plant generally produces several pups, so you usually end up with more bromeliads than you started out with.

Dividing bromeliad pups during the summer is a great way to develop your plant propagation skills. Pups are separated from the original plant any time after they have grown to be about one-third the size of the original plant.

Using a sharp knife or hand pruners, cut the pups from the original plant at the point where they are joined. The pups should have some root development, but if they don't, that's OK. Pups will form their own roots after they are potted. Pot each pup individually in a small pot (generally a 3- or 4-inch pot is large enough) using a quality potting mix. Bromeliads should be planted only up to the base of their lowest leaves.

Since the newly potted pups will have a poorly developed root system or none at all, you may need to support them initially by placing two or three small stakes around the plant (chopsticks or pencils work well) until they are well established. Keep the potting medium moist but not constantly wet, and, if the bromeliad is one of those that forms a cup with its leaves, make sure you keep it filled with water.

Adequate light is critical to getting the plant that grows from the pup to bloom. With good care, the pups generally will bloom one to three years after separation from the original plant.

It's nice to know that when you buy a bromeliad or receive one as a gift you will wind up with more plants than you started out with – if all goes well. This is one of the great joys of growing bromeliads and why they are so much fun to collect.

Photos from OnlinePlantGuide.com

Checklist for summer

- Control thrips, aphids, cucumber beetles and spider mites on roses by using a recommended insecticide or miticide. Also, continue blackspot control by using a recommended fungicide at seven- to 10-day intervals.
- When irrigating, water the soil area thoroughly. Try to irrigate less often, but irrigate well each time. Light, overhead sprinkling is not the best way to water.
- Continue to plant warm-season bedding plants such as Mexican heather, ornamental peppers, ornamental sweet potatoes, angelonia, coleus, impatiens, periwinkle, cosmos, begonia, pentas, globe amaranth, ageratum, salvia 'Victoria,' marigold, portulaca, blue daze, perennial verbena, purslane, dusty miller, rudbeckia, abelmoschus, narrow-leaf zinnia, Profusion zinnia, wishbone flower, caladium, balsam, gerbera daisy, gaillardia, celosia, lantana, scaevola, melampodium, butterfly weed, shrimp plant, cleome, four o'clock, perilla, hardy hibiscus (mallow), sunflower, salvias and cigar flower.
- Plant sunflowers in late summer for fall flower arrangements. Flower colors include yellow, orange, red, bronze, white and combinations of these. About 60 to 80 days usually is required from sowing seed until first flower color.
- Prune azaleas no later than mid-July. Pruning azaleas after early to midsummer may remove next season's developing flower buds. This applies to most spring-flowering shrubs including hydrangeas and gardenias.
- In early summer, gardenias may have aphids, whiteflies and the associated black sooty mold. For optimum plant performance, control the insects with Orthene or a light horticultural oil spray.
- Keep caladiums well watered during hot, dry weather to keep the foliage in good shape through the summer. You may apply a fertilizer now to encourage vigorous growth. Break off any flowers that form.
- Camellias and azaleas need care to set a good crop of flower buds for next year. Healthy, vigorous plants will set buds, but weak plants may not. If plants lack vigor, fertilize, provide moisture during stressful periods and control pests. Remember these acid-loving plants need a pH of 5.5. Submit a soil sample to your parish LSU AgCenter extension agent if you are unsure of your soil situation.
- Louisiana irises are semi-dormant in the late summer. Prune off seedpods and yellow or brown foliage to help keep the plants more attractive. You may transplant or divide Louisiana irises beginning in August.
- Cut faded flowers from flowering annuals and perennials to encourage new growth and flowers. Old blooms and seed heads left on the plants can retard continued flower production.
- Finish any pruning you may need to do to shrubs in the landscape, particularly those that bloom in winter or spring. Pruning later (after June) may interfere with flowering.
- Keep up with weeding. This time of year weeds can get out of hand very fast. Use mulches wherever possible. If you need help with herbicide recommendations, contact your local LSU AgCenter Extension Office. Avoid applying most lawn weed killers during summer because high temperatures increase the chance they will damage your lawn grass.

Dan Gill
Consumer Horticulture

Turfgrass Care

Tips for summer care of turfgrass

Summer is prime growing season for lawns in Louisiana. If you did not fertilize your lawn during the spring, you still have time to fertilize and get your lawn in good shape prior to fall.

Keep up a good fertility program through early to mid-August only. Water deeply only once or twice a week, as needed.

Watch for chinch bugs in St. Augustine and Bermuda grass lawns and treat with an LSU AgCenter recommended insecticide. Chinch bug problems show up as yellow-brown areas of the lawn during hot and dry weather. These insects extract plant juices from turfgrass stems and crowns while pumping toxic salivary fluids into the plant, which disrupt the plant's vascular system.

There is still time to dethatch Bermuda grass, zoysia and centipede grass through late July, if needed. Consider renting mechanical dethatchers for zoysia and Bermuda grass lawns. It might be better to just hand rake out "thatchy" areas of centipede grass lawns, because centipede grass can be slow to recover from aggressive dethatching. Fertilize and water lawns after dethatching. And keep in mind that St. Augustine grass is not as prone to thatch problems as other lawn grasses.

Centipede should receive its optional second and last fertilizing in late July or August. For centipede grass, apply only one-half pound of nitrogen per 1,000 square feet as a complete turf fertilizer (example: 3 pounds of 17-0-17 per 1,000 square feet or 5 pounds of 10-0-10 per 1,000 square feet). Other lawn grasses would need about twice this rate.

A slow-release, turf-blend fertilizer is best and worth the extra cost. These types of fertilizers are widely available at garden centers and feed stores throughout the state.

Carpet grass only needs one fertilizing in spring. Fertilize St. Augustine grass, Bermuda grass, and zoysia in June and again in early to mid-August with at least 1 pound of actual nitrogen per 1,000 square feet (example: 7 pounds of 13-13-13 per 1,000 square feet or 5 pounds of 19-19-19 per 1,000 square feet).

Make sure lawns are getting adequate amounts of moisture during the summer months. Centipede grass is the least tolerant lawn to drought, so make sure it receives adequate amounts of moisture, especially during dry periods.

If you intend to apply a winterizer on your lawn for fall, don't just go by the name "winterizer," because it may be a northern type of fertilizer for a fescue-blend type of lawn. These types of winterizers are common at big box stores. A true southern winterizer fertilizer should be low in nitrogen and high in potassium, or just use 0-0-60 (muriate of potash). You will need about 1 pound of potash (K_2O) equivalent per 1,000 square feet. You can apply this as 1 ½ pounds muriate of potash.

Apply all granular materials on a dry lawn, and water in soon after application.

Weed management is very difficult in St. Augustine grass and centipede grass lawns, because herbicides can cause severe lawn injury when temperatures exceed 90 degrees Fahrenheit. Limit applications to careful spot treatments to reduce lawn injury.

Ron Strahan
Weed Scientist/Turfgrass Specialist

Want to start a school garden? It's not difficult!

Want to grow a school garden? It's not all that hard. Summer is the time to start thinking about and preparing the ground to grow a fall garden with students.

If you don't already have a garden at your school, there are several items you need to consider before planting.

The first one is the location. Most vegetables and flowers require sunlight. Choose an area that has at least 6 to 8 hours of direct sunlight a day.

Second, the garden should be located near a water source. You will need to irrigate once the seeds are planted, so be sure a hose will reach all sections of the garden space.

Finally, choose an area with good drainage. You don't want to plant your school garden in a low area that collects water. Standing water will cause root rot, which kills plants.

Once you have a location selected, kill the existing vegetation. Use a broad spectrum herbicide such as glyphosate to kill weeds and grass. Allow the herbicide to penetrate the plants. Two weeks after spraying the herbicide, till the area and remove all plant material. Remember to remove roots as well as tops so weeds do not propagate themselves in the garden area.

Build rows or beds for the plants to grow in. Make sure students are able to reach the middle of the row or bed without walking on it. You don't want to compact the soil. A suggestion is 3-foot-wide rows with a 4-5 foot space between each row.

Read the rest of the Horticulture Hints for plant suggestions. Vegetables that are planted and harvested within the school year include beans, beets, broccoli, cabbage, carrots, cauliflower, collard greens, cucumbers, lettuce, English peas, peppers, potatoes, radishes, strawberries, tomatoes and turnips.

A garden can be easily integrated into the school curriculum. There are science, art, history, math and physical education activities that can be done in a garden.

The Internet has a wealth of information on garden lessons for teachers. The Texas Junior Master Gardener Curriculum also is a great guide for integrating a garden into the classroom.

Of course, visit www.lsuagcenter.com for more gardening tips!

Kathryn Fontenot
Community/School Garden Vegetable Specialist

Vegetable Gardening

Vegetables to plant during the summer

- June: Transplant heat-set tomatoes for fruit production in August through October. Plant collards, cucumbers, melons, cantaloupes, okra, southern peas, pumpkins and summer squash. Transplant eggplants, all the peppers and sweet potato slips. Start seed of fall tomatoes and bell peppers. Good pest control practices are necessary because of the high pressure of insects and diseases now.
- July: Transplant tomatoes and bell peppers in mid-July for fall production. Also, plant okra, southern peas, cucumbers, squash, cantaloupes, pumpkins and watermelons.
- Mid- to late July: Seed broccoli, Brussels sprouts, cauliflower, Chinese cabbage, cabbage, collards and winter squash. Transplant bell peppers and tomatoes.
- August: This very hot time may experience damaging droughts. Start bush snap beans and bush limas. Plant seed for cucumbers, collards, broccoli, Brussels sprouts, cauliflower, cabbage, Chinese cabbage, summer squash, southern peas, mustard and green shallot sets.
- Mid-August: Gardeners in north Louisiana can plant Irish potatoes and start seed for head lettuce and beets. Transplant broccoli and Brussels sprouts.
- Late August: Gardeners in south Louisiana now can do the above (see suggestions for mid-August in north Louisiana).

Crop Highlights

Broccoli and cauliflower. Both can be direct-seeded beginning in mid-July through September or transplanted from early August through early September. It takes four to six weeks to produce transplants from seed. In general, broccoli and cauliflower will require 5 to 6 pounds (or pints) of a complete fertilizer such as 8-24-24 per 100 feet of row. These crops, especially cauliflower, require fast, continuous growth for proper head development. Keep them well watered and fertilized. Side-dress plants with ¾ pound (1 ½ cups) of ammonium nitrate per 100 feet of row three to four weeks after transplanting and again 14 days after that. Varieties that will produce in about 60 days from transplanting reduce the chance of cold-weather damage. Recommended varieties are:

Broccoli		Cauliflower	
Arcadia	Triathalon	Majestic	Incline
Gypsy	Windsor	Wentworth	Snow Crown
Everest	Premium Crop	Candid Charm	Freedom
Diplomat	Packman	Cumberland	Symphony
Greenbelt	Green Comet		
Patron			

Snap beans. Late August through early September is the best time to plant. Normally 50 to 55 days are required from planting until harvest. Don't let beans suffer from drought. Choose Provider, Bluelake 274, Roma II, Derby, Ambra, Magnum, Valentino, Festina, Bronco, Royal Burgundy, Green Crop, Hialeah, Strike, Caprice, Greenable, Lynx, Nash and Shade. For a yellow wax bean, choose Golden Rod Wax. Bush beans usually will produce more successfully than pole beans in the fall because of their earlier maturity.

Butter beans. This crop is harder to produce in the fall than are snap beans. Plant early enough to produce before frost and late enough so they're not blooming while temperatures are too high for fruit set. Plant in early August through about mid-August. Plant bush beans for fall production (Henderson, Fordhook 242, Thorogreen, Jackson Wonder or Dixie Butterpea).

Irish potatoes. Plant small whole potatoes saved from the spring crop from about mid-August to early September. Good soil moisture is essential. The seed potatoes may not sprout readily after planting because of a physiological rest period of about 90 days that they have to go through after harvesting in the spring. After this rest period is satisfied, the tubers should sprout. Fall yields are lower than spring yields. Use small potatoes for seed pieces, not market tubers.

Cabbage. Plant seed beginning in mid-July, and seed through September. You also may transplant beginning in early August through mid-October. Fertilize the same as broccoli and cauliflower. Space cabbage, cauliflower and Chinese cabbage about 12 to 14 inches apart and broccoli 6 to 12 inches apart. Double drills (two drills of plants spaced 10-12 inches apart on a single row) will help maximize yield. Try Rio Verde for late plantings. Recommended early maturity varieties include Platinum, Dynasty, Gold Dynasty and Stonehead (AAS). Maturing a little later are Rio Verde, Solid Blue 780, Red Dynasty, Emblem, Blue Dynasty, Thunderhead Royal Vantage, Silver Dynasty, Blue Thunder, Cheers, Vantage Point, Savoy Ace (AAS) and Savoy King (AAS).

Squash and cucumbers. These two crops can be planted in June, July and August. Summer plantings normally will be ready to begin harvesting after about six weeks. Yields usually are lower than spring plantings. A fall crop of yellow summer squash, zucchini and cucumbers can be grown by planting seed in August. Squash vine borers may be a more severe problem in fall than in spring, so be prepared to control them with an insecticide. Viruses are a problem in the fall. New cucumbers are Daytona and Stonewall. New squash are Medallion, Fortune, Lioness, Justice, Lynx and Leopard.

Pumpkins. Pumpkins for Halloween should be planted in early to mid-July. Apply 3-5 pounds of a complete fertilizer for each 100 feet of row before

planting. Plant five to six seed in hills about 4 to 5 feet apart on rows 6 to 8 feet apart. Thin to one or two plants per hill. Apply a side-dressing of 1 pound (1 pint) of ammonium nitrate per 100 feet of row when vines begin to run. Keep soil moist for best production. Howden and Biggie are excellent varieties to grow for Halloween. The Connecticut Field is an old, popular variety. Recommended varieties of giant pumpkins are Big Moon, Full Moon, Big Max, Atlantic Giant and Prize Winner. The medium-size varieties that have done well in research trials are Spirit, Lumina, Big Autumn, Gold Rush, Autumn Gold, Gold Bullion, Howdy Doody, Dependable, Gold Medal, Merlin and Sorcerer. Frosty, Big Autumn, Neon, Magic Lantern and Aspen produce a dwarf vine that should be tried in home gardens. Many ornamental pumpkins like Jack-Be-Little, Baby Bear, Munchkin and Lil Ironsides can be planted.

Greens. Begin planting greens – mustards, turnips and collards – during August. Keep the soil moist to ensure a good stand. Try some of the white turnips like White Lady and Tokyo Cross for roots and Seven Top, AllTop, Topper and Southern Green for greens. Also good are Just Right, Royal Crown, Purple Top WG and Red Giant.

Shallots. Dry sets of shallots can be planted from August to April. About 50 to 60 days from planting, tops will be ready to harvest.

Fall bell peppers. If plants from the spring are still in good condition, they can be nursed (sprayed or dusted and watered) throughout summer. They will set fruit again as the temperatures become more favorable. If seeds of bell peppers haven't been planted by early June, buy transplants.

Fall tomatoes. Transplant fall tomatoes in July. Be prepared to spray with insecticides and fungicides. Insect and disease pressure usually is worse in the fall than in the spring. The heat-set varieties that have produced well in recent trials are Sun Leaper, Florida 91, Sun Master, Solar Fire, Sun Chaser, Phoenix, Solar Set and Heat Wave II. These varieties have the ability to set some fruit in high temperatures, allowing the fruit to mature before cool weather. Row covers, which protect the plants from the first frost, have prolonged the harvest period, and they enhance fruit maturity. Also worth trying in fall is BHN 216. Since fall tomatoes are a crop you can't really be sure of, it's interesting to try several early varieties. Certain varieties may produce better in some parts of the state than others because of the variation in climate and soils. Start early, and get a strong bush.

Lettuce. Head lettuce can be grown in Louisiana in late August. A common mistake is planting the seed too deep. Lettuce seed require light for germination, so scatter the seed on the row and lightly rake it into the soil. Plant leaf lettuce in September. Keep the soil moist until the seeds have germinated and are well established. Head types are tougher to grow. Keep lettuce growing actively to keep it from becoming bitter. Recommended varieties of head lettuce are Summertime, Mighty Joe, Ithaca, Mavrick and Great Lakes 659. For leaf lettuce, try Slobolt, Red Salad Bowl, Grand Rapids, Red Fire, Tango, Red Sails, Salad Bowl, Sunset, Simpson or Elite. The recommended romaine lettuce varieties are Parris Island, Ideal, Green Forest and Green Towers. For butterhead or bibb lettuce: Buttercrunch, Ermosa, Esmerelda, Nancy or Oak Leaf. And for batavia types (leaf lettuce with a unique flavor): Nevada or Sierra.

James Boudreaux

Cultural practices for peach, nectarine, plum trees

Fertilization

Peach, nectarine and plum trees grown in most soils benefit from annual fertilizer applications.

Soil tests every two or three years will indicate which nutrients need to be applied. Many soils are acidic and benefit from lime applications. Follow soil test recommendations and apply lime, as needed, to maintain soil pH between 5.5 and 6.5. Balanced fertilizers such as 13-13-13 and 8-8-8 are commonly recommended for fertilizing fruit trees and do a very good job of supplying plant nutrients.

Too much soil phosphorus could be undesirable, however. The soil test will provide this information. Phosphorus (P), the middle letter in NPK fertilizers such as 13-13-13, can build up to high levels in soils and may not need to be applied annually like nitrogen (N) and potassium (K) do.

Nitrogen is commonly the limiting plant nutrient, and annual applications usually are needed for optimum plant growth and fruit production. A shortage of nitrogen can cause insufficient shoot growth (less than 6 inches per year), pale green or yellow foliage, and small, well-colored fruit. Too much nitrogen can cause excessive shoot growth (more than 36 inches), deep green foliage, and late-maturing, poorly colored fruit. Excessive vegetative growth will shade fruitwood in the lower portion of the tree canopy and eventually will cause the fruitwood to die. In time, the surviving fruitwood will be in the upper reaches of the tree canopy, not distributed throughout the tree.

Research indicates fruit trees benefit from a split application of fertilizer, especially nitrogen, annually. Apply half the recommended fertilizer in February before bud break, and apply the second half around mid-August. Spread the fertilizer evenly around the tree under the drip line of the branches.

Here are general guidelines to use for fertilizing peach, nectarine and plum trees, but remember soil conditions vary from site to site. Use soil test recommendations and personal observations of the growth and appearance of the fruit trees along with these recommendations as the basis for fertilizer applications.

Excessive fertilization does not help the plant, the environment or the budget.

First year – Apply 1 pound of a complete fertilizer (for example, 13-13-13) at bud break (early spring) in a circle starting 10 to 12 inches from the base of the tree. Apply 1 pound of a complete fertilizer 20 to 24 inches from the base of the tree in early June. Apply the fertilizer in a band approximately 12 inches wide. Place the fertilizer to encourage outward growth of roots.

Second year – Apply 2 pounds of a complete fertilizer (13-13-13) in a circle under the drip line of the tree in early spring. Apply 2 pounds of a complete fertilizer under the drip line of the tree in early June.

Third year – Apply 4 pounds of a complete fertilizer (13-13-13) in a circle starting 2 feet from the base of the tree out to the edge of the drip line. Apply half of the fertilizer in early spring and the remaining half in August (late summer).

Mature trees – Fertilize at the rate of 1 to 1 1/2 pounds of a complete fertilizer per year of age until trees are 8 to 10 years old. Then apply 8 to 10 pounds per year. Divide this fertilization into two applications, one in early spring and the other in late summer. If soil tests indicate high levels of phosphorus, do not use a complete fertilizer. Instead, base fertilization on soil test recommendations.

Irrigation

Fruit trees respond well to irrigation during times of drought.

Prolonged summer droughts reduce vegetative and fruit growth. If it is needed, irrigation during the early life of a fruit tree will speed the development of the tree structure and bring the tree into bearing up to two years earlier than nonirrigated trees. The fruit from a bearing tree that is irrigated during a prolonged summer drought will be larger than the fruit from a tree that is not irrigated. By mid- to late summer, the irrigated bearing tree will be in better condition to set fruit buds for the following year than the nonirrigated tree will be.

In general, 1 inch of water per week should suffice. Drip or trickle irrigation is ideal, because the slow rate of application allows the water to soak deep into the soil. This encourages deep root growth that enables fruit trees to better withstand the stresses of hot, dry summer weather.

Pruning

The best time to prune fruit trees is late winter and early spring before bud break. Do not prune in October, November, December or January.

Training the fruit tree is much easier if you start the process the year it is planted. The goal of pruning peach, nectarine and plum trees is to create an open-centered, vase-shaped tree with the main scaffold branches covering all the area allotted for the tree. The mature tree will have branches forming the sides of the vase, and the interior of the tree will be open so that sunlight can contact all branches and twigs.

Immediately after planting, while the tree is still dormant, cut back the tree to 24 to 30 inches above the ground. This will result in the emergence of several branches near the top of the remaining stem. Avoid scaffold branches that arise from the trunk higher than 30 inches from the ground, because they will make the tree top heavy. Remove all lateral branches to within ½ to 1 inch of the trunk.

After growth starts, remove all the new growth except four to six branches equally spaced around the trunk. Branches arising lower than 20 inches above the ground are less desirable than those higher on the stem. At the end of the first season of growth, reduce the number of lateral

branches to three or four spaced about 6 inches apart vertically and equally distributed around the tree trunk. These will become the main scaffold branches of the tree.

Choose branches of equal vigor. Sometimes weak branches will never catch up with more vigorous branches and will eventually be removed. It is very desirable to have the scaffold branches growing at a 45-degree angle from the trunk of the tree. A branch that is more upright, with an angle less than 45 degrees, will be more vegetative than fruitful. If the branch grows at an angle more than 45 degrees from the trunk, horizontal to the ground or lower, it will lack sufficient vigor to be a useful scaffold branch.

First year, dormant pruning – To encourage branching, remove the terminal bud of the selected scaffold branches after the first growing season. The tree needs maximum foliage during the first through third growing seasons to establish the tree structure. Minimal pruning that leaves maximum foliage is desirable in the first and second dormant prunings. Prune to establish the vase shape.

Second and third years – In the dormant pruning after the second and third seasons of growth, continue to train the main scaffold branches so they grow at a 45-degree angle. Remove strong sprouts that are growing straight up. If the scaffold branches start growing too upright, prune them back to selected branches growing at the desired 45-degree angle. This is the time to build the framework of the tree for the future. The primary and secondary scaffold branches will support the foliage and fruit in future years. Arrange the scaffold branches so sunlight can penetrate the tree canopy to maintain fruitwood from top to bottom of the canopy, rather than only at the top.

Mature tree pruning – After the primary scaffolds and main framework of the tree are established, the goal of annual dormant pruning is to maintain an optimum amount of fruiting wood distributed evenly throughout the tree canopy. The current year's fruit buds of peach, nectarine and plum are formed on

the previous season's growth and are visible by August. It is necessary to leave many of these new shoots during pruning, so the tree will produce fruit. As the tree grows older, renew the fruiting wood by removing 2- to 3-year-old shoot growth and leaving new or 1-year-old growth. Prune to maintain the desired height. Some people prefer to keep fruit trees short, so all pruning, thinning and harvesting can be done from the ground without a ladder. Taller trees can produce more fruit than shorter trees, but they require more labor for spraying, pruning, thinning and harvesting. To mature to optimum size, each peach fruit requires 35 to 45 leaves. Pruning away fruitwood is the first step in thinning the fruit load on a tree. Thinning the fruit load optimizes fruit size and keeps branches from being broken because of too much fruit weight. A healthy situation for a fruit tree is to have a full crop of fruit that the tree can support without help. Remove any sprouts arising below the bud or graft union because they are from the rootstock and probably will not produce desirable fruit.

Fruit thinning, harvesting

Dormant pruning removes a large number of flower buds and partially thins fruit.

You must thin fruit from overloaded trees so they can produce fruit of adequate size and good quality. Thinning also helps prevent limb breakage.

Peach and plum fruit should be spaced 6 to 8 inches apart on the fruiting branches. Early ripening varieties need greater spacing and must be thinned before pit hardening to produce large fruit. Later maturing varieties can be thinned at the pit-hardening stage without much loss in final fruit size.

Generally, fruit in the top of the tree canopy will grow larger than fruit in the bottom of the canopy, so fruit lower in the canopy should be spaced farther apart than those in the top.

An advantage of homegrown fruit is that the best quality possible can be attained by allowing fruit to ripen on the tree. Most fruit for commercial use is picked three to seven days before soft ripeness so it can withstand handling and shipping.

Peach ripeness is estimated by the disappearance of green and the development of yellow under color on the fruit. Harvest the fruit by hand with a slight twist of the wrist to loosen the fruit from its stem. To keep bruising at a minimum, place picked fruit into shallow containers.

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Parish agents, please adapt these suggestions to your area before disseminating.